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ABSTRACT

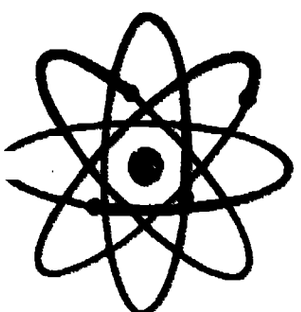
This document presents statistical data concerning enrollments for fall 1973 and degrees granted 1965-June 1973 in nuclear engineering. Highlights of this survey of educational institutions indicated: (1) Ph.D.'s decreased to 126 from 149 in 1971-72 and from 181 in 1969-70. (2) MS's increased to 442 from 428 in 1971-72. (3) BS's increased to 551 from 464 in 1971-72. (4) Foreign nationals represented 3 percent of the BS, 13 percent of the MS, and 22 percent of the Ph.D. graduates, smaller percentages of MS and Ph.D. graduates than the prior year. (5) The percent of foreign nationals increased among doctoral candidates and undergraduate students; the percent among master's candidates decreased. (6) Private industry continued to recruit the largest portion of the graduates at all levels. (7) The percent of MBS and MS graduates remaining for further study declined. (8) Women and minority U. S. citizens (black, oriental, Spanish-speaking, or Native American Indians) represent no more than 3 percent of enrollees or graduates in any category or at any level. (MJM)

WASH-1228 (74)
UC-2

NUCLEAR ENGINEERING ENROLLMENTS AND DEGREES

ENROLLMENTS-FALL 1973

DEGREES GRANTED JULY 1965-JUNE 1973



UNITED STATES ATOMIC ENERGY COMMISSION
Division of Labor Relations

JULY 1974

The U. S. Atomic Energy Commission is grateful to the educational institutions which participate in this survey. The usefulness of information is relative to the completeness of the data, and all institutions known to offer degree programs in nuclear engineering have responded to the survey.

Numerous requests are received each year for information about the availability of women and minorities trained in nuclear engineering. A breakout for reporting participation by these groups was added to the data collection instrument, and the results are included in this year's report.

Adequate numbers of nuclear-trained engineers are vital to the fulfillment of the nation's nuclear power commitment. This publication will serve as a guide to the sources for nuclear-trained engineers.

H T Herrick

H. T. Herrick, Director
Division of Labor Relations

HIGHLIGHTS
1972-1973 NUCLEAR ENGINEERING ENROLLMENT AND DEGREE SURVEY

1. PhD's *decreased* to 126 from 149 in 1971-72 and from 181 in 1969-70

2. MS's *increased* to 442 from 428 in 1971-72

3. BS's *increased* to 551 from 464 in 1971-72

4. Foreign nationals represented 3% of the BS, 13% of the MS, and 22% of the PhD graduates, smaller percentages of MS and PhD graduates than the prior year.

5. The percentage of foreign nationals increased among doctoral candidates and undergraduate students; the percentage among master's candidates decreased.

6. Private industry continued to recruit the largest portion of the graduates at all levels.

7. The percentage of BS and MS graduates remaining for further study declined.

8. Women and minority U.S. citizens (black, oriental, Spanish-speaking, or Native American Indian) represent no more than 3% of enrollees or graduates in any category or at any level.

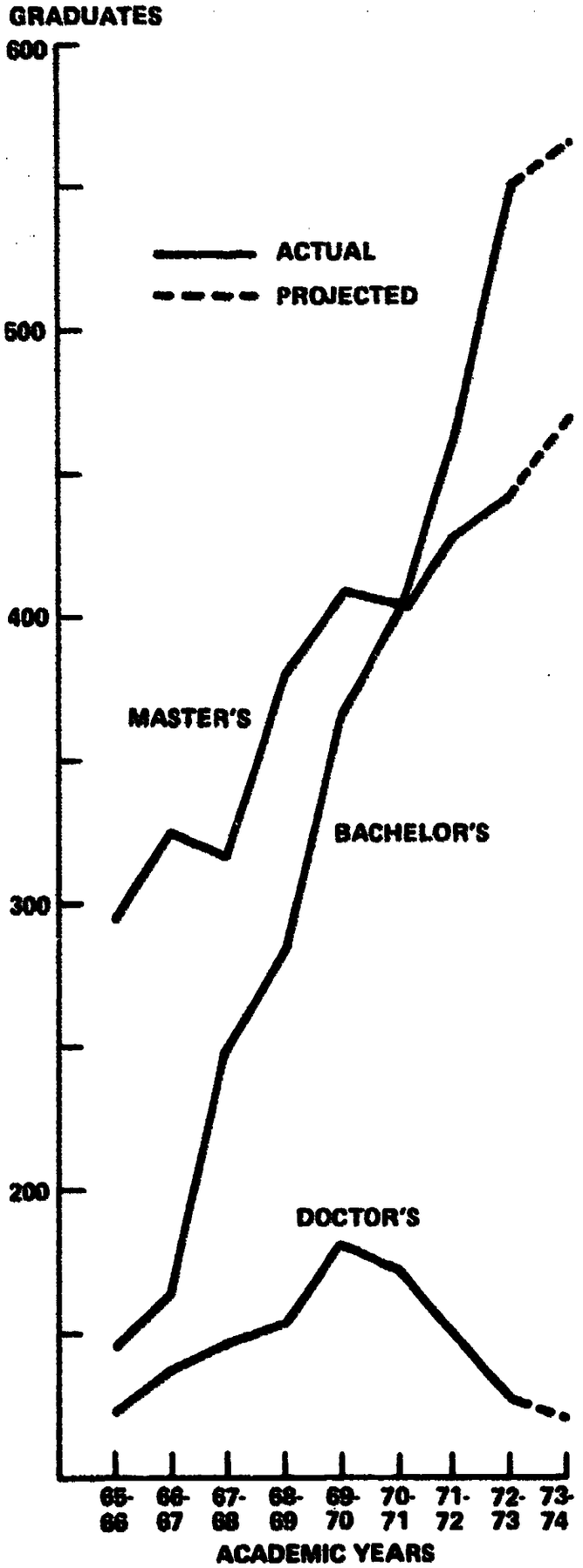
TRENDS

Nuclear engineering as a discipline is relatively new in the educational community. The number of persons receiving degrees in nuclear-oriented engineering has almost doubled in 8 years (see Appendix A). The emergence of the nuclear industry from one of research and development to one with increasing emphasis on application and production is reflected in the patterns of growth and decline at the various degree levels (see Figure 1). In 1966, twice as many master's as bachelor's degrees were granted in nuclear engineering. In 1973, bachelor's degrees exceeded master's by nearly 20 percent. The PhD degree output peaked in 1970 at 181 and has been on the decline since, dropping to 126 in 1973. This pattern of growth and decline can be attributed to several factors. During the 1966-70 period, demands for persons with doctorates in nuclear engineering were high for conducting increased Federally funded research and development (R&D) activities, for staffing universities as they initiated and strengthened nuclear engineering departments, and for meeting private industry's need for highly trained nuclear engineers to carry out research activities. The downward trend started with the drop in Federal support for graduate students as university staffing requirements began to be met, and as AEC expenditures for R&D decreased from fiscal year 1971 through FY 1972. Conversely, the numbers of bachelor- and master-level nuclear engineers have been increasing as emphasis shifts to application, production activities, facilities design and construction. Employment in the private sector of the atomic energy field in 1973 exceeded employment in the Government-Owned Contractor-Operated (GOCO) facilities for the first time.[1]

The upward trends in bachelor's and master's graduates may be expected to continue through the 1973-74 academic year. Three problems are besetting the balance of new nuclear-trained engineers: (1) the severe drop in freshman engineering enrollments of the past several years[2], (2) the competition among the various disciplines for outstanding students to enter other fields which will also be in high demand to help attain energy self-sufficiency, and (3) the heavy recruitment activity which is depleting graduate Nuclear Engineering departments. Strong efforts will have to be put forth to assure that adequate numbers of undergraduate engineering students select nuclear options for specialization and that sufficient numbers are attracted to graduate study in the discipline. Incentive programs, such as the AEC-supported traineeships, internships, and laboratory participation programs, and similar programs financed through trade and professional groups help stimulate capable students to seek master's degrees in nuclear engineering. Additional incentive programs may be needed, however, to meet the demand for personnel at this level.

The question of future trends for PhD graduates is distressing. At the present enrollment level and with the paucity of financial assistance for PhD candidates, no increase in graduates can be anticipated. Probably an even lower number of PhD graduates will be available in 1974 than in 1973. Fall 1973 enrollments at the doctoral level dropped 6 percent from Fall 1972 enrollments[3]. Although most of the drop was in part-time PhD enrollments, which will soften the impact, increased industry recruitment offering high salaries is attracting students away from the graduate schools before they finish their degree work and, in some cases, the faculty as well. It is obvious that the continual erosion of this country's nuclear research and development (R&D) capability as reflected in the declining output of PhD nuclear engineers must be halted. The desolution of nuclear engineering

Figure 1
TRENDS IN NUCLEAR ENGINEERING DEGREES 1966-1973 AND PROJECTIONS FOR 1974



departments in a number of universities only compounds the potential shortages of highly qualified research personnel. The projected level of 120-125 new PhD nuclear engineers yearly will hardly meet a minimum attritional need since many will not be available to enter the work force.

Nuclear Engineering Degree or Option. The BS-level student is less likely to be enrolled in a discrete "nuclear engineering" program than the graduate-level student. Of the 1972-73 graduates, only 60 percent of the BS compared to 94 percent of MS and 93 percent of PhD graduates had definite nuclear engineering degrees (see Appendix B). Mechanical engineering is the "other engineering" field most likely to offer a nuclear option, with electrical engineering following. Curriculum developments of the next few years will no doubt produce some interesting subfields to meet the needs for persons with interdisciplinary training.

Nuclear Engineering as Compared to All Engineering. Nuclear engineering graduates represent only 1.74 percent of total engineering graduates at all degree levels, slightly more than in the base year 1966 when 1.08 percent of engineering graduates were in nuclear engineering. Gains at the bachelor's degree level have been greatest, with the proportion increasing steadily from 0.40 percent to 1.27 percent of the engineering degrees granted in 1973, a year in which the number of new BS nuclear engineers continued to increase in spite of a drop in the total number of engineering bachelors (see Table 1). At the master's level the pattern has not been consistent, although, small overall gains have been made, from 2.15 percent of all master's in engineering in 1966 to 2.58 percent in 1973.

At the doctoral level, the decline in percentage of nuclear to all engineering has been almost constant. In 1973, nuclear engineering PhD's represented only 3.51 percent of total PhD engineers compared to 5.30 percent in 1966. As shown in Table 1, the percentage decline in PhD nuclear engineers was greater than in engineering in general. Although the number of 1973 graduating PhD engineers in all engineering fields was 95 percent of the 1972 record level, graduating nuclear engineering PhD's represented less than 85 percent of the previous year's number, and only 70 percent of the peak year 1970.

Table 2 was compiled from information contained in a 1972 survey of scientists and engineers employed in research and development[4]. It will be noted that persons working in non-supervisory positions as nuclear engineers compared to those working as engineers in all fields are (1) more likely to be degreed and (2) more likely to have advanced degrees. While parallel information is not available for those

NUCLEAR ENGINEERING DEGREES, 1966 - 1973
AS A PERCENTAGE OF ALL ENGINEERING

DEGREES Year Ended June 30	BACHELOR'S All Eng.	BACHELOR'S Nuc. Eng.	BACHELOR'S % Nu / All	MASTER'S All Eng.	MASTER'S Nuc. Eng.	MASTER'S % Nu / All	DOCTOR'S All Eng.	DOCTOR'S Nuc. Eng.	DOCTOR'S % Nu / All
1966	35,815	145	0.40	13,677	294	2.15	2,303	122	5.30
1967	36,186	164	0.45	13,887	325	2.34	2,614	137	5.24
1968	38,002	249	0.66	15,152	317	2.09	2,933	146	4.98
1969	39,972	284	0.71	14,980	381	2.55	3,345	153	4.58
1970	42,966	367	0.85	15,548	407	2.62	3,620	181	5.00
1971	43,167	399	0.92	16,383	403	2.46	3,640	171	4.70
1972	44,190	464	1.05	17,356	428	2.47	3,774	149	3.95
1973	43,429	551	1.27	17,152	442	2.58	3,587	126	3.51

NOTE: Nuclear Engineering Degrees do not include those in Nuclear Engineering with a Health Physics or similar option; these are reported in AEC's Survey of *Radiation Protection Enrollments and Degrees* (WASH 1229 (74)).

SOURCE: Data for All Engineering Degrees from *Engineering and Technology Graduates 1973.* Engineering Manpower Commission of Engineers Joint Council, Dept. P, 345 E. 47th Street, New York, New York 10017.

Table 2

MIX BY DEGREE LEVEL IN RESEARCH AND DEVELOPMENT ACTIVITY

Working as	Non-degreed %	BS %	MS %	PhD %
1. Nonsupervisory Nuclear Engineer	2.9	55.7	30.7	10.7
2. Nonsupervisory Engineer, all fields	9.4	61.1	22.5	6.9
3. Nonsupervisory Engineers by highest degree	–	68.0	24.6	7.4
4. Supervisory engineers by highest degree	–	63.0	27.5	9.5

working as supervisory engineers in nuclear engineering, the table shows that, as persons working as engineers in all fields move into supervisory positions, the percentage with advanced degrees increases (compare line 4 with line 3). It can be seen further that those working as nonsupervisory nuclear engineers are more likely to have advanced degrees than those working as *supervisory* engineers in all fields (compare line 1 to line 4). This points to the higher educational background traditional in nuclear R&D activities.

In the rapidly expanding non-research activities of the nuclear industry, there is a much greater demand for bachelor- and master-level engineers than in research and development.

Placement of Nuclear Engineering Graduates. No more than two-thirds (742) of the 1119 graduates in nuclear engineering entered the U.S. civilian labor market. Twenty-four percent remained in school for further study, 9 percent went into or remained in the military, and at least one percent were employed in foreign countries. By degree level those not entering the U.S. labor force directly were 12 percent of the PhD's, 37 percent of MS's and 36 percent of the BS's.

Private industry continued to employ the largest group of graduates at all degree levels, taking 40 percent of all graduating nuclear engineering PhD's and 42 percent of the MS's (see Table 3 and Figure 2). The greatest change in the placement picture was industry's employment of 42 percent of BS

Figure 2
PLACEMENT OF 1972-73 GRADUATES
WITH NUCLEAR ENGINEERING BACKGROUND

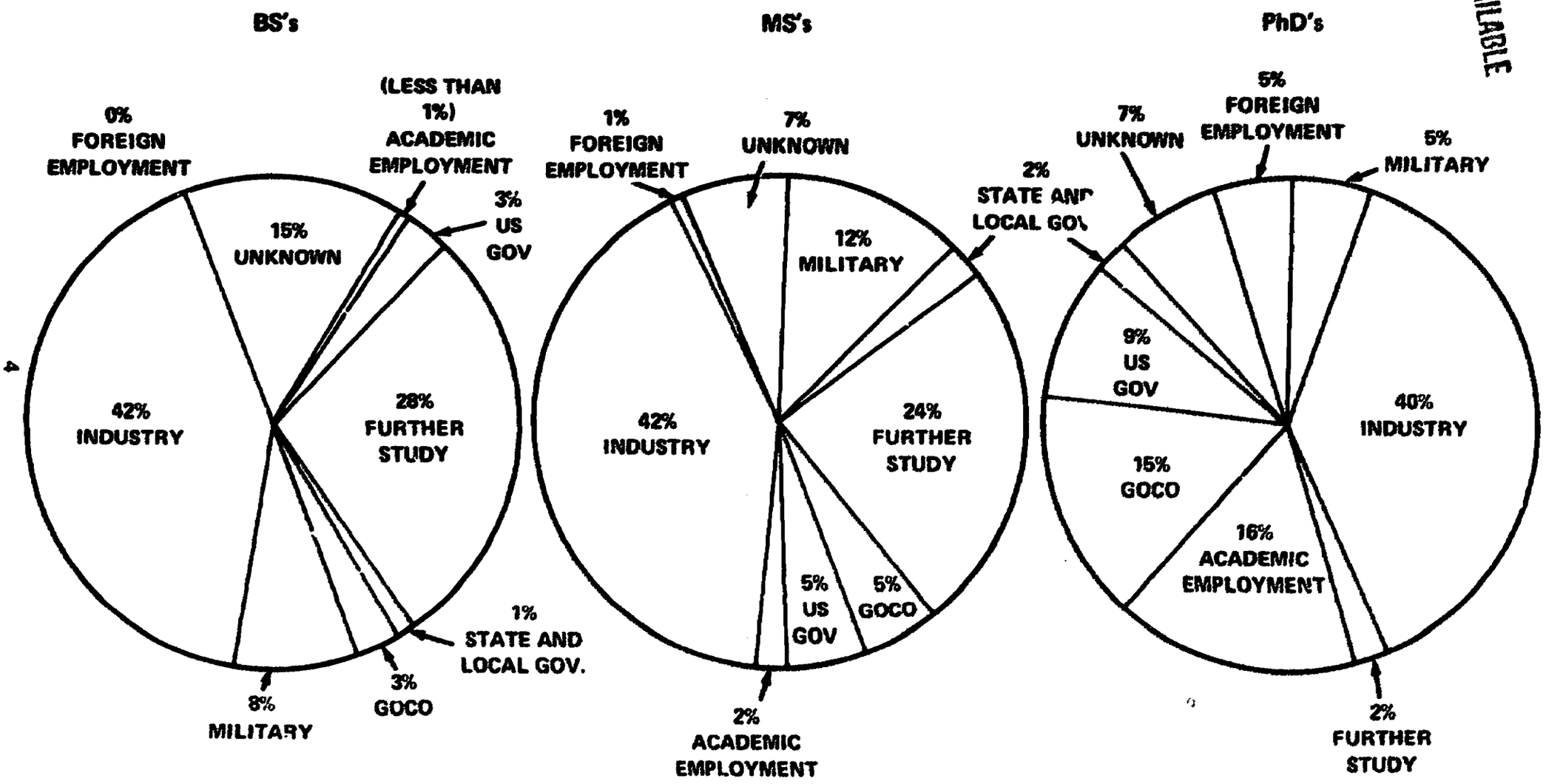


Table 3

PLACEMENT OF 1972-1973 GRADUATES WITH NUCLEAR ENGINEERING DEGREES OR OTHER ENGINEERING DEGREES WITH NUCLEAR OPTIONS

Placement or plans after graduation	DEGREE RECIPIENTS JULY 1972-JUNE 1973					
	Bachelor		Master		Doctor	
	#	%	#	%	#	%*
a. Further study	153	28	108	24	3	2
b. Academic employment	3	**	8	2	20	16
c. U.S. Government employment	18	3	21	5	11	9
d. GOCO (Gov.-owned, Contractor-operated installations) employment	15	3	24	5	19	15
e. State and Local Government employment	4	1	7	2	2	2
f. Industry employment	230	42	184	42	50	40
g. Military service	43	8	54	12	6	5
h. Foreign employment	0	0	4	1	6	5
i. Unknown	85	15	32	7	9	7

*Percentages do not add to 100 because of rounding.

**Less than 1%

graduates, a substantial increase above the prior year's 33 percent[3].

The placement of new PhD recipients in the private sector was higher than in the U.S. Government, its contractor-operated facilities, and State and local governments combined. Academic placement of new PhD's dropped from 18 percent to 16 percent, and foreign employment took at least 5 percent.

The number of master's recipients who remained for additional study was considerably below the previous year (24 percent compared to 28 percent), and the percentage of bachelor's recipients who remained in school also dropped (from 30 percent to 28 percent). Decreases in the number remaining for further study reflect (1) the greater recruitment by industry at these levels and (2) the lack of financial support for graduate education. When viewed against the expanding needs for graduate-level R&D personnel to help meet our national energy development goals, the situation in our graduate nuclear engineering departments deserves close attention.

Foreign Students. The number of foreign nationals among enrollees and graduates, as shown in Table 4, also raises concern, because there is every likelihood that the number of nuclear engineering graduates available for employment in the U.S. labor force must be further reduced by the number who are

Table 4

FOREIGN NATIONALS ENROLLED IN OR DEGREED IN NUCLEAR ENGINEERING

	ENROLLMENTS FALL 1973					DEGREES GRANTED 1972-1973		
	Undergraduate							
	3rd Yr.	4th Yr.	5th Yr.	Master	Doctorate	Bachelor	Master	Doctorate
Number	13	44	2	150	183	16	58	28
Percent	2	6	9	15	29	3	13	22

not U.S. citizens. Tightening of immigration regulations for scientists and engineers following recent reductions in the aerospace industry has greatly reduced the number of non-U.S. engineers who can now be permitted to accept employment in this country. Inasmuch as foreign students are concentrated at the graduate levels, the impact is more sorely felt. Twenty-two percent of the PhD graduates and 29 percent of the PhD candidates are foreign nationals. Further compounding the problem is the fact that the non-citizens are usually full-time students, so that of full-time PhD candidates, 34 percent are non-U.S. citizens. At the master's level, 13 percent of graduates and 15 percent of enrollees are foreign nationals.

It is not known how many foreign nationals among the 1973 graduates sought or were allowed to accept employment in this country. It is known that some were employed in foreign countries, and many of the graduates whose post-graduation placement is shown as "unknown" in Table 3 were foreign nationals who presumably returned to their home countries. According to a mid-1970 survey of scientists and engineers (S&E) who immigrated to the U.S. during the "brain drain" (1964-69) 28 percent held doctoral degrees and another 29 percent held master's degrees. This compares to 10 percent and 20 percent, respectively, of all S&E's employed in the U.S. More than half of the immigrant S&E's had been on student visas prior to immigration. This is indicative of the extent this country was recruiting among foreign students to meet S&E requirements. The study further revealed that one in five were then enrolled in full- or part-time graduate training at the university level. Of those so enrolled, 25 percent sought PhD's and nearly half sought MS's[5].

As stated above, under present immigration regulations this country cannot depend on foreign nationals for staffing requirements. The present high proportion of foreign nationals among graduate students no doubt contributes to the viability of our nuclear engineering departments during a time of decreased enrollment of U.S. students. However, prospects for the supply of nuclear-oriented engineers to meet recruitment requirements must be weighed against the proportion of foreign nationals among enrollees. This fact must be considered when looking at the enrollment and degree figures shown Appendix C and elsewhere in this survey. The numbers of foreign nationals among students and graduates by institution is shown in Appendix D.

Minorities and Females. Table 5 shows the appallingly low representation of women and minorities in nuclear engineering. Although a few institutions reported that information on female or minority participation was not available or not available at the undergraduate level (see Appendix D), it is doubtful that complete reporting would have significantly changed the percentages, which range downward from 3.3 percent participation by women as undergraduates.

Black U.S. citizens represented 1.6 percent at all levels of degrees granted. Orientals received 2.4 percent of doctorates and less than one percent of

Table 5

FEMALES AND MINORITIES ENROLLMENTS AND DEGREES IN NUCLEAR ENGINEERING

	ENROLLMENTS FALL 1973								DEGREES GRANTED JULY 1972 - JUNE 1973					
Group	Undergraduate 3rd Yr.		Undergraduate 4th Yr.		Master		Doctorate		Bachelor		Master		Doctorate	
	No.	%*	No.	%*	No.	%*	No.	%*	No.	%*	No.	%*	No.	%*
Women, U.S. Citizens	17	2.8	23	3.3	17	1.7	9	1.5	6	1.1	2	0.5		
Blacks, U.S. Citizens	4	0.7	7	1.0	20	2.0	4	0.6	9	1.6	7	1.6	2	1.6
Spanish Speaking U.S. Citizens	7	1.2	12	1.7	15	1.5	1	0.2	5	0.9	3	0.7	1	0.8
Oriental, U.S. Citizens	2	0.3	6	0.8	9	0.9	11	1.8	3	0.5	4	0.9	3	2.4
Native American Indians	1	0.2			1	0.1	1	0.6						

*Percent of total.

bachelor's and master's degrees. Women received no doctorates, 0.5 percent of master's and 1.1 percent of bachelor's degrees. Spanish-speaking U.S. citizens received less than one percent of degrees at all levels. There were 3 Native American Indians enrolled, one at each degree level, but none among graduates.

Demand for Nuclear-Trained Engineers. The primary purpose of this study is to assess the supply side of the nuclear engineering manpower picture. However, it is appropriate to present a summary of the demand outlook for such manpower.

The Bureau of Labor Statistics of the Department of Labor has surveyed employment in the atomic energy field for the AEC for many years. Not included are employees of Federal, State, and local Governments, those working in uranium mining and construction (other than reactors), and personnel employed in non-AEC-connected university atomic energy research and teaching.

The 1973 survey revealed the continued decline of employment within Government-owned contractor-operated facilities. The decrease noted between the 1971 and 1973 surveys was more than offset by increased employment in the private sector[1]. Employment of engineers in those private establishments reporting in both the 1971 and 1973 surveys increased by 24 percent, or 12 percent per year. Employment of engineers in all surveyed segments of the nuclear industry as of July 1973 numbered 33,000, including 4500 classified as nuclear engineers. This latter figure does not include engineers classified as mechanical, chemical, etc., who require a core of nuclear knowledge equivalent to that needed for a nuclear option i.e., the disciplines included in this study. The growth rate in the private sector of the nuclear industry can be expected to continue at least at its present level. A 1971 manpower survey of investor-owned electric utility companies asked for an indication of specialization needed in advanced degree (MS and PhD) engineering graduates required in the 1971-80 period. These companies estimated that 24 percent of new hires would need a nuclear engineering specialization[6]. Additional nuclear-oriented personnel will be needed by the architect-engineers, vendors, fuel cycle and regulatory organizations, and all other activities which support the construction and operation of nuclear power plants.

The long decline in GOCO employment will probably halt with the reversal of R&D activity as reflected in recent budget askings (see Figure 3). Less than 2% of the research programs included in the budget askings through fiscal year 1975 will be in non-nuclear fields; many programs will require engineers with nuclear training.

A shortage of experienced nuclear-trained engineers at all levels now exists. This shortage will continue, especially at the doctoral level, until the present increased staffing needs are met. Industry growth through this century will continue to create a demand for nuclear engineers. Although considerable mobility of experienced personnel will meet many of the critical staffing needs, new graduates must be available to replace those who move up.

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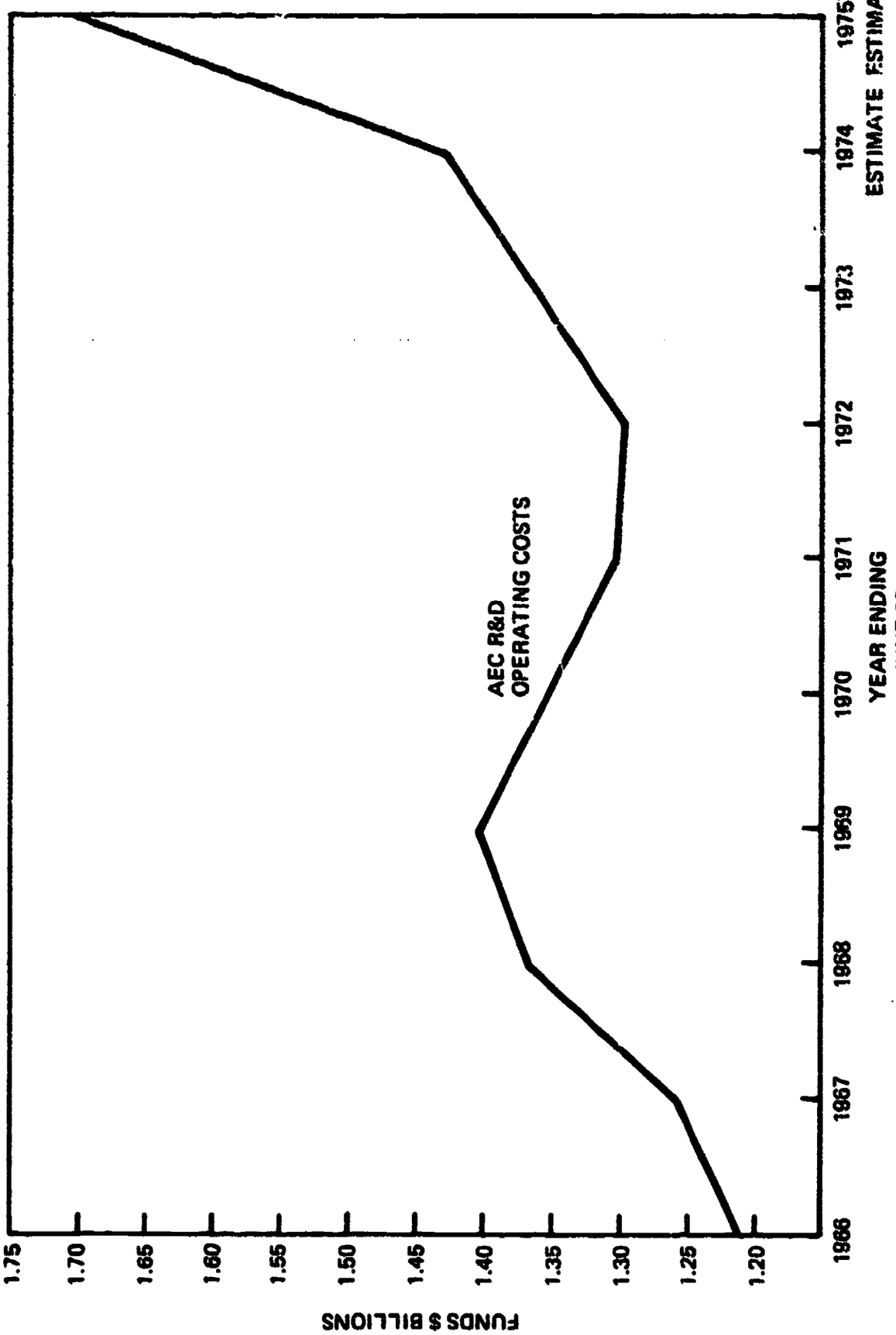
1. USDL-74-110, "Occupational Employment in the Atomic Energy Field 1973," A press release reporting a survey conducted by the U.S. Department of Labor for the Atomic Energy Commission, Mar. 13, 1974.
2. Engineering Manpower Commission of Engineers Joint Council, *Engineering and Technology Enrollments*, Fall 1973, Dept. P. 345 E. 47th, New York, New York, 10017.
3. U.S. Atomic Energy Commission, *Nuclear Engineering Enrollment and Degree Survey*, WASH-1228(73), May 1973.
4. Battelle, Columbus Laboratories, *1972 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities*, U.S. Government Printing Office, Washington, D.C., Nov. 1972.
5. National Science Foundation, *Immigrant Scientists and Engineers in the United States*, NSF-73-302, 1973.
6. Edison Electric Institute, *Report of the EEI Task Force on Educational Priorities*, 1972.

FIGURE 3
AEC R&D OPERATING COST



*AEC Budget Submission for 1975

APPENDIX A

NUCLEAR ENGINEERING
DEGREES GRANTED 1965-1973
By Institution

B=Bachelor
M=Master
D=Doctorate

State and Institution	July-June	1965-1966			1966-1967			1967-1968			1968-1969			1969-1970			1970-1971			1971-1972			1972-1973		
		B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D
Alabama																									
Tuskegee Institute		-	-	-	-	2	-	-	2	-	-	2	-	-	2	-	-	2	-	-	-	-	-	2	-
Arizona																									
*Arizona State University		3	-	-	5	1	-	6	-	-	4	-	-	3	1	-	6	1	-	5	2	-	5	1	-
University of Arizona		-	7	3	-	5	-	4	4	-	4	6	5	14	5	5	13	6	8	8	2	-	6	4	3
California																									
California State Univ.-San Jose		4	-	-	8	-	-	8	-	-	7	-	-	8	-	-	-	-	-	7	-	-	8	-	-
Stanford University		-	11	6	-	7	6	-	11	6	-	12	2	-	30	5	-	15	2	-	8	1	-	5	2
University of California - Berkeley		-	15	5	-	27	7	-	24	12	-	26	5	-	16	11	-	22	10	3	28	10	-	9	5
University of California - Davis		-	-	-	-	-	2	-	-	1	-	-	2	-	-	2	-	-	1	-	-	2	Cancelled		
University of California - Los Angeles		-	7	2	-	4	3	-	3	6	-	7	3	-	8	5	15	6	5	-	9	6	9	-	4
University of California - Santa Barbara		First Degree Awarded 1970-1971															1	1	-	8	1	-	9	-	-
Connecticut																									
U. S. Coast Guard Academy		First Degree Awarded 1972-1973																					7	-	-
District of Columbia																									
Catholic University		-	6	-	-	5	-	-	5	1	-	11	1	-	6	3	-	12	2	-	-	2	-	5	2
Howard University		-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	2	-	-	1	-	11	-	-
Florida																									
University of Florida		-	8	4	-	9	4	4	3	7	16	11	4	15	10	7	15	7	4	11	15	1	10	13	3
Georgia																									
Georgia Institute of Technology		-	7	2	-	6	3	-	12	-	-	26	2	-	19	3	-	19	9	-	32	7	-	46	6

NUCLEAR ENGINEERING - DEGREES GRANTED 1965-1973 (Cont'd)

State and Institution	July-June-	1965 1966			1966 1967			1967 1968			1968 1969			1969 1970			1970 1971			1971 1972			1972 1973		
		B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D
Idaho																									
Idaho State University		-	-	-	2	-	-	6	-	-	5	2	-	9	4	-	8	1	-	6	2	-	7	1	-
University of Idaho		8	1	-	14	2	-	9	3	1	7	1	-	9	2	-	11	4	1	8	3	-	11	5	-
Illinois																									
Northwestern University		-	-	1	-	3	1	2	-	1	1	5	2	2	4	1	3	3	3	3	1	1	5	6	3
University of Illinois		-	17	8	-	13	5	-	8	9	-	21	7	-	19	7	-	23	17	-	23	7	-	25	3
Indiana																									
Purdue University		-	8	4	-	11	8	-	5	10	-	12	5	-	6	10	-	10	5	8	12	4	15	9	3
University of Notre Dame		11	-	-	7	2	1	5	1	2	6	1	1	5	3	1	1	1	1	2	-	-	6	-	-
Iowa																									
Iowa State University of Science & Tech.		-	5	4	-	12	6	-	8	7	-	6	9	-	5	10	-	6	4	-	14	7	-	5	4
Kansas																									
Kansas State University		19	7	-	18	5	-	15	5	1	13	6	4	14	3	3	13	5	1	17	11	6	21	8	6
University of Kansas		-	1	-	-	1	-	-	3	-	Program Cancelled														
Kentucky																									
University of Kentucky		-	-	-	-	-	-	1	-	-	6	2	-	4	2	1	3	2	-	-	3	-	-	2	-
Louisiana																									
Louisiana State University		-	-	-	-	-	-	-	-	-	-	2	-	-	2	-	-	2	-	-	3	-	5	4	-
Maryland																									
University of Maryland		-	2	7	-	1	5	-	3	5	-	4	5	-	5	7	6	9	8	6	4	6	16	2	-
Massachusetts																									
Lowell Technological Institute		11	-	-	10	-	-	21	-	-	18	2	-	19	-	-	12	-	-	37	2	-	40	1	-
Massachusetts Institute of Technology		-	33	15	-	39	22	-	29	13	-	41	14	-	39	22	-	31	14	-	31	21	-	34	14

NUCLEAR ENGINEERING - DEGREES GRANTED 1965-1973 (Cont'd)

State and Institution	July-June-	1965 1966			1966 1967			1967 1968			1968 1969			1969 1970			1970 1971			1971 1972			1972 1973		
		B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D
Michigan																									
University of Michigan		-	14	13	4	23	13	5	21	14	9	18	10	23	19	8	15	20	8	20	9	15	25	18**	6
Mississippi																									
Mississippi State University		6	2	-	7	3	-	11	1	-	8	5	-	7	2	-	6	-	-	10	1	-	11	2	-
Missouri																									
University of Missouri - Columbia		-	1	-	-	1	-	-	3	-	-	1	-	-	7	1	-	6	1	-	7	2	-	11	4
University of Missouri - Rolla		9	1	-	4	4	-	5	5	1	4	7	-	7	1	-	11	6	1	8	5	1	11	6	1
Nevada																									
University of Nevada		3	2	-	5	-	-	3	2	-	3	1	-	1	1	-	5	-	-	4	-	-	2	-	-
New Jersey																									
Newark College of Engineering		-	-	-	-	1	-	20	-	-	18	-	-	18	1	-	16	-	-	17	-	-	17	-	-
New Mexico																									
University of New Mexico		-	8	2	-	6	1	-	3	1	-	9	2	2	12	4	6	9	4	3	9	2	4	12	1
New York																									
Columbia University		4	11	6	1	11	5	6	8	7	8	4	6	10	10	8	8	7	10	3	8	4	8	6**	1
Cornell University		-	7	9	-	6	6	-	6	7	-	-	2	-	5	5	-	6	3	-	9	2	-	6	2
Long Island U-C.W. Post College		-	-	-	-	-	-	-	-	-	-	4	-	-	5	-	-	2	-	Cancelled					
Polytechnic Institute of New York		-	14	3	3	6	3	12	15	-	5	4	2	9	9	1	15	4	1	8	11	1	6	13	2
Rensselaer Polytechnic Institute		-	9	6	6	5	6	8	14	3	16	7	11	10	13	4	9	6	3	20	13	4	17	14	1
SUNY-Buffalo		-	-	-	-	-	-	2	-	-	4	1	-	3	8	-	7	2	-	3	2	-	9	-	-
North Carolina																									
North Carolina State Univ.-Raleigh		19	7	5	14	5	5	8	6	1	19	4	5	19	7	5	29	9	3	21	10	3	26	13	3

NUCLEAR ENGINEERING - DEGREES GRANTED 1965-1973 (Cont'd)

State and Institution	July-June-	1965-1966			1966-1967			1967-1968			1968-1969			1969-1970			1970-1971			1971-1972			1972-1973		
		B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D
Ohio																									
Air Force Institute of Technology		-	2	-	-	10	-	-	13	-	-	20	1	-	16	1	-	16	1	-	11	3	-	6	1
Case Western Reserve University		-	2	2	-	4	4	-	2	5	-	-	2	-	-	3	-	2	-	-	2	2	-	2	1
Ohio State University		-	1	-	-	7	-	-	4	-	3	4	2	5	16	2	7	8	4	5	6	2	5	11	6
University of Cincinnati		-	8	-	-	9	-	-	5	-	-	4	-	4	8	-	8	7	1	2	14	4	2	7	3
Oklahoma																									
Oklahoma State Univ. of Agriculture and Applied Science		First Degree Awarded 1971-1972																		-	-	1	-	-	-
University of Oklahoma		-	3	1	-	4	1	-	-	-	-	-	-	-	-	-	2	1	-	5	3	-	3	1	2
Oregon																									
Oregon State University		-	-	-	-	-	-	-	2	-	2	3	-	9	2	1	7	2	1	13	2	-	15	2	-
Pennsylvania																									
Carnegie-Mellon University		-	-	1	-	5	2	-	6	1	-	6	4	-	7	1	-	14	5	-	14	5	-	17	8
Pennsylvania State University		-	13	1	-	10	5	-	11	5	2	8	6	5	12	2	16	12	2	12	16	3	21	12	3
Puerto Rico																									
University of Puerto Rico		-	1	-	-	4	-	-	2	-	-	4	-	-	3	-	-	5	-	-	5	-	-	5	-
Rhode Island																									
University of Rhode Island		First Degree Awarded 1970-1971															-	2	-	-	-	-	-	1	1
South Carolina																									
University of South Carolina		-	-	-	-	-	-	-	4	-	-	2	-	Program Cancelled											
South Dakota																									
South Dakota State University		First Degree Awarded 1970-1971															1	-	-	2	-	-	2	-	-

NUCLEAR ENGINEERING - DEGREES GRANTED 1965-1973 (Cont'd)

State and Institution	July-June-	1965 1966			1966 1967			1967 1968			1968 1969			1969 1970			1970 1971			1971 1972			1972 1973		
		B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D	B	M	D
Tennessee																									
University of Tennessee		15	4	1	11	2	1	12	10	2	17	10	8	29	4	2	14	7	8	24	3	3	12	5	2
*Vanderbilt University		12	6	2	20	3	-	22	2	-	18	-	1	20	-	-	11	-	-	10	-	-	10	-	-
Texas																									
Texas A&M University		-	7	2	-	6	3	5	6	3	8	8	2	5	3	3	11	6	3	20	5	1	32	15	2
*University of Texas - Austin		-	3	-	-	2	1	-	2	1	-	8	1	-	4	1	-	3	3	20	5	1	25	4	3
Utah																									
University of Utah		6	1	-	5	2	-	7	2	-	7	3	1	8	3	2	21	2	-	22	5	-	-	7	-
Utah State University		8	-	-	8	3	-	9	1	-	9	1	1	13	2	-	9	2	-	7	2	-	12	6	-
Virginia																									
University of Virginia		-	4	1	-	3	2	-	8	3	-	1	2	5	15	7	18	14	2	32	11	3	30	11	5
Virginia Polytechnic Institute		-	4	2	-	4	4	14	1	4	15	1	4	26	1	4	23	1	1	26	5	1	31	13	1
Washington																									
University of Washington		-	10	2	-	8	-	-	8	5	-	6	4	-	10	3	-	20	1	-	10	1	-	15	3
Washington State University		-	-	-	-	-	-	-	-	-	-	2	-	-	1	2	-	2	2	3	2	-	4	-	-
West Virginia																									
West Virginia University		-	3	-	-	2	-	-	2	-	-	1	1	-	1	1	-	-	1	-	-	1	-	-	-
Wisconsin																									
University of Wisconsin		7	10	2	10	10	2	19	13	1	21	17	4	24	7	7	15	10	7	18	15	3	20	14	6
Wyoming																									
University of Wyoming		-	1	-	2	1	-	-	-	-	1	-	-	3	-	-	2	-	-	-	1	-	-	-	-
TOTAL		145	294	122	164	325	137	249	317	146	284	381	153	367	407	181	399	403	171	464	428	149	551	442	126

* Bachelor Degrees estimated
** Includes 1 Professional Degree

APPENDIX B

NUCLEAR ENGINEERING
ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION

ENROLLMENTS FALL 1973 — DEGREES GRANTED JULY 1972 - JUNE 1973

CURRICULUM OR OPTION	UNDERGRAD 3 RD YEAR	UNDERGRAD 4 TH YEAR	UNDERGRAD 5 TH YEAR	MASTER	DOCTORATE	DEGREES BACHELOR	DEGREES MASTERS	DEGREES DOCTORATE
NUCLEAR ENGINEERING	427	411	19	950	589	364	416	117
CHEMICAL WITH NUCLEAR OPTION	10	20	1	2		18		
CIVIL WITH NUCLEAR OPTION	13	12		1	2	4	1	
ELECTRICAL WITH NUCLEAR OPTION	35	76		11	7	35	4	1
INDUSTRIAL WITH NUCLEAR OPTION	2						1	
MECHANICAL WITH NUCLEAR OPTION	98	118	2	54	18	103	20	5
GENERAL WITH NUCLEAR OPTION	5	7				7		
ENGR SCI WITH NUCLEAR OPTION	10	14				12		
ENGR PHYSICS WITH NUC OPTION	2	2				3		
NUC ENGINEERING TECHNOLOGY	8	39				6		
OCEAN WITH NUC OPTION					1			1
METALLURGICAL ENGR WITH NUC OPTION		1				2	1	
AEROSPACE WITH NUC MAJOR					5			1
GEOCHRONOLOGY (NUC MINOR)								1
TOTAL	610	700	22	1018	622	551	442	126

APPENDIX C

NUCLEAR ENGINEERING
ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION

FT = FULL TIME
PT = PART TIME

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1973										DEGREES GRANTED JULY 1972 - JUNE 1973		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
ALABAMA													
TUSKEGEE INSTITUTE													
NUCLEAR ENGINEERING							5					2	
SCHOOL TOTAL							5					2	
STATE TOTAL							5					2	
ARIZONA													
ARIZONA STATE UNIVERSITY													
MECHANICAL WITH NUCLEAR OPTION	2		4				2				5	1	
ENGR SCI WITH NUCLEAR OPTION	4		1										
SCHOOL TOTAL	6		5				2				5	1	
UNIVERSITY OF ARIZONA													
NUCLEAR ENGINEERING	14		16	2			14	1	14	4	6	4	2
ELECTRICAL WITH NUCLEAR OPTION							4		1				
MECHANICAL WITH NUCLEAR OPTION							5						
GEOCHRONOLOGY (NUC MINOR)													1
SCHOOL TOTAL	14		16	2			23	1	15	4	6	4	3
STATE TOTAL	20		21	2			25	1	15	4	11	5	3
CALIFORNIA													
CALIFORNIA STATE UNIVERSITY, SAN JOSE													
MECHANICAL WITH NUCLEAR OPTION	5	1	6	1							8		
SCHOOL TOTAL	5	1	6	1							8		
STANFORD UNIVERSITY													
CIVIL WITH NUCLEAR OPTION							1		2			1	
ELECTRICAL WITH NUCLEAR OPTION									1				
MECHANICAL WITH NUCLEAR OPTION							8	3	9	1		4	2
SCHOOL TOTAL							9	3	12	1		5	2
UNIVERSITY OF CALIFORNIA, BERKELEY													
NUCLEAR ENGINEERING							30	3	44	2		9	5
CIVIL WITH NUCLEAR OPTION	5												
ELECTRICAL WITH NUCLEAR OPTION	10												
INDUSTRIAL WITH NUCLEAR OPTION	2												
MECHANICAL WITH NUCLEAR OPTION	16												
SCHOOL TOTAL	33						30	3	44	2		9	5

NUCLEAR ENGINEERING
ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1973										DEGREES GRANTED JULY 1972 - JUNE 1973		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
UNIVERSITY OF CALIFORNIA, LOS ANGELES													
NUCLEAR ENGINEERING							15	4	16	1	9		4
SCHOOL TOTAL							15	4	16	1	9		4
UNIVERSITY OF CALIFORNIA, SANTA BARBARA													
NUCLEAR ENGINEERING	3		9								9		
SCHOOL TOTAL	3		9								9		
STATE TOTAL	41	1	15	1			54	10	72	4	26	14	11
CONNECTICUT													
UNITED STATES COAST GUARD ACADEMY													
NUCLEAR ENGINEERING	7		5								7		
SCHOOL TOTAL	7		5								7		
STATE TOTAL	7		5								7		
DISTRICT OF COLUMBIA													
CATHOLIC UNIVERSITY OF AMERICA													
NUCLEAR ENGINEERING		1					1	34	3	13		5	2
SCHOOL TOTAL		1					1	34	3	13		5	2
HOWARD UNIVERSITY													
MECHANICAL WITH NUCLEAR OPTION			8				8	2			11		
SCHOOL TOTAL			8				8	2			11		
STATE TOTAL		1	8				9	36	3	13	11	5	2
FLORIDA													
UNIVERSITY OF FLORIDA													
NUCLEAR ENGINEERING	31		24		4		18	5	14	1	10	13*	3
SCHOOL TOTAL	31		24		4		18	5	14	1	10	13	3
STATE TOTAL	31		24		4		18	5	14	1	10	13	3
GEORGIA													
GEORGIA INSTITUTE OF TECHNOLOGY													
NUCLEAR ENGINEERING	8		2				33		13	6		46	6
SCHOOL TOTAL	8		2				33		13	6		46	6
STATE TOTAL	8		2				33		13	6		46	6

*Includes one Engineer's Degree

NUCLEAR ENGINEERING
ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1973										DEGREES GRANTED JULY 1972 - JUNE 1973		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
IDAHO													
IDAHO STATE UNIVERSITY													
NUCLEAR ENGINEERING							11					1	
GENERAL WITH NUCLEAR OPTION	5		7								7		
SCHOOL TOTAL	5		7				11				7	1	
UNIVERSITY OF IDAHO													
NUCLEAR ENGINEERING							1	14				2	
CHEMICAL WITH NUCLEAR OPTION	2		4								5		
ELECTRICAL WITH NUCLEAR OPTION			2								1		
MECHANICAL WITH NUCLEAR OPTION	2		2								3	2	
METALLURGICAL ENGR WITH NUC OPTION			1								2	1	
SCHOOL TOTAL	4		9				1	14			11	5	
STATE TOTAL	9		16				12	14			18	6	
ILLINOIS													
NORTHWESTERN UNIVERSITY													
NUCLEAR ENGINEERING	5		5		2		5	3	6	1	5	6	3
SCHOOL TOTAL	5		5		2		5	3	6	1	5	6	3
UNIVERSITY OF ILLINOIS AT URBANA													
NUCLEAR ENGINEERING							34		49			25	3
SCHOOL TOTAL							34		49			25	3
STATE TOTAL	5		5		2		39	3	55	1	5	31	6
INDIANA													
PURDUE UNIVERSITY													
NUCLEAR ENGINEERING	10		9				28		9	4	15	9	3
SCHOOL TOTAL	10		9				28		9	4	15	9	3
UNIVERSITY OF NOTRE DAME													
MECHANICAL WITH NUCLEAR OPTION	5*		6				1		2		6		
SCHOOL TOTAL	5		6				1		2		6		
STATE TOTAL	15		15				29		11	4	21	9	3
IOWA													
IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY													
NUCLEAR ENGINEERING							19		12			5	4
SCHOOL TOTAL							19		12			5	4
STATE TOTAL							19		12			5	4

*Estimated

NUCLEAR ENGINEERING
ENROLLMENTS AND DEGREES BY SUBFIELDS

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1973										DEGREES GRANTED JULY 1972 - JUNE 1973		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
KANSAS													
KANSAS STATE UNIVERSITY													
NUCLEAR ENGINEERING	15		35				7	1	7	2	21	8	6
SCHOOL TOTAL	15		35				7	1	7	2	21	8	6
STATE TOTAL	15		35				7	1	7	2	21	8	6
KENTUCKY													
UNIVERSITY OF KENTUCKY													
NUCLEAR ENGINEERING							5	1	2			1	
CHEMICAL WITH NUCLEAR OPTION							1						
MECHANICAL WITH NUCLEAR OPTION							3					1	
SCHOOL TOTAL							9	1	2			2	
STATE TOTAL							9	1	2			2	
LOUISIANA													
LOUISIANA STATE UNIVERSITY, BATON ROUGE													
NUCLEAR ENGINEERING							12	1				4	
ENGR SCI WITH NUCLEAR OPTION	1		4								5		
SCHOOL TOTAL	1		4				12	1			5	4	
STATE TOTAL	1		4				12	1			5	4	
MARYLAND													
UNIVERSITY OF MARYLAND, COLLEGE PARK													
NUCLEAR ENGINEERING	3		6				4	4	6	7	2	2	
CHEMICAL WITH NUCLEAR OPTION	4		4								4		
ELECTRICAL WITH NUCLEAR OPTION			5								6		
MECHANICAL WITH NUCLEAR OPTION	2		3								4		
SCHOOL TOTAL*	9		18				4	4	6	7	16	2	
STATE TOTAL	9		18				4	4	6	7	16	2	
MASSACHUSETTS													
LOWELL TECHNOLOGICAL INSTITUTE													
NUCLEAR ENGINEERING	24		31				12	5			40	1	
SCHOOL TOTAL	24		31				12	5			40	1	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY													
NUCLEAR ENGINEERING							50		72			34	14
SCHOOL TOTAL							50		72			34	14

*Estimated

NUCLEAR ENGINEERING
ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1973										DEGREES GRANTED JULY 1972 - JUNE 1973		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
STATE TOTAL	24		31				62	5	72		40	35	14
MICHIGAN													
UNIVERSITY OF MICHIGAN													
NUCLEAR ENGINEERING	25	1	29	2	2		32	16*	37	2	25	18*	6
SCHOOL TOTAL	25	1	29	2	2		32	16	37	2	25	18	6
STATE TOTAL	25	1	29	2	2		32	16	37	2	25	18	6
MISSISSIPPI													
MISSISSIPPI STATE UNIVERSITY													
NUCLEAR ENGINEERING	17		11				1	1			11	2	
SCHOOL TOTAL	17		11				1	1			11	2	
STATE TOTAL	17		11				1	1			11	2	
MISSOURI													
UNIVERSITY OF MISSOURI, COLUMBIA													
NUCLEAR ENGINEERING							13	6	1	14		11	4
CHEMICAL WITH NUCLEAR OPTION	1		1										
CIVIL WITH NUCLEAR OPTION	4		8										
ELECTRICAL WITH NUCLEAR OPTION	5		15					4					
MECHANICAL WITH NUCLEAR OPTION			8					1					
SCHOOL TOTAL	10		32				13	11	1	14		11	4
UNIVERSITY OF MISSOURI, ROLLA													
NUCLEAR ENGINEERING	18		14				10		4	2	11	6	1
SCHOOL TOTAL	18		14				10		4	2	11	6	1
STATE TOTAL	28		46				23	11	5	16	11	17	5
NEVADA													
UNIVERSITY OF NEVADA, RENO													
ELECTRICAL WITH NUCLEAR OPTION							1						
ENGR SCI WITH NUCLEAR OPTION	3		3								2		
SCHOOL TOTAL	3		3				1				2		
STATE TOTAL	3		3				1				2		
NEW JERSEY													
NEWARK COLLEGE OF ENGINEERING													
CHEMICAL WITH NUCLEAR OPTION			1								1		
ELECTRICAL WITH NUCLEAR OPTION	3		28								9		
MECHANICAL WITH NUCLEAR OPTION			4								3		

*Includes one Professional Degree

NUCLEAR ENGINEERING
ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1973										DEGREES GRANTED JULY 1972 - JUNE 1973		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
NEW JERSEY													
NEWARK COLLEGE OF ENGINEERING													
ENGR SCI WITH NUCLEAR OPTION	1		05								4		
SCHOOL TOTAL	4		38								17		
STATE TOTAL	4		38								17		
NEW MEXICO													
UNIVERSITY OF NEW MEXICO													
NUCLEAR ENGINEERING							16	15	6	7		12	1
ELECTRICAL WITH NUCLEAR OPTION	1		02								2		
MECHANICAL WITH NUCLEAR OPTION	2		02								2		
SCHOOL TOTAL	3		4				16	15	6	7	4	12	1
STATE TOTAL	3		4				16	15	6	7	4	12	1
NEW YORK													
COLUMBIA UNIVERSITY													
NUCLEAR ENGINEERING	6		02				7*	13*	16		8	6**	1
SCHOOL TOTAL	6		2				7	13	16		8	6	1
CORNELL UNIVERSITY													
NUCLEAR ENGINEERING							11	1	7			6	2
SCHOOL TOTAL							11	1	7			6	2
POLYTECHNIC INSTITUTE OF NEW YORK†													
NUCLEAR ENGINEERING	5		04				4	28	8	9	6	13††	2
SCHOOL TOTAL	5		4				4	28	8	9	6	13	2
RENSSELAER POLYTECHNIC INSTITUTE													
NUCLEAR ENGINEERING	20		19				19	2	10	2	17	14	1
SCHOOL TOTAL	20		19				19	2	10	2	17	14	1
STATE UNIVERSITY AT BUFFALO													
NUCLEAR ENGINEERING	3		04				8				9		
SCHOOL TOTAL	3		4				8				9		
STATE TOTAL	34		29				49	44	41	11	40	39	6
NORTH CAROLINA													
NORTH CAROLINA STATE UNIVERSITY AT RALEIGH													
NUCLEAR ENGINEERING	34		32		5		19		13		26	13	3
SCHOOL TOTAL	34		32		5		19		13		26	13	3

*Includes two Professional Degree candidates **Includes one Professional Degree
†Previously New York U. ††Includes two Engineer's Degrees

NUCLEAR ENGINEERING
ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1973										DEGREES GRANTED JULY 1972 - JUNE 1973		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
NORTH CAROLINA													
STATE TOTAL	34		32		5		19		13		26	13	3
OHIO													
AIR FORCE INSTITUTE OF TECHNOLOGY													
NUCLEAR ENGINEERING							25					6	
AEROSPACE WITH NUC MAJOR									5				1
SCHOOL TOTAL							25		5			6	1
CASE WESTERN RESERVE UNIVERSITY													
ELECTRICAL WITH NUCLEAR OPTION								2	4	1		2	1
SCHOOL TOTAL								2	4	1		2	1
OHIO STATE UNIVERSITY													
NUCLEAR ENGINEERING							18	3	13	5		11	6
CHEMICAL WITH NUCLEAR OPTICA	1		1								1		
MECHANICAL WITH NUCLEAR OPTION	3		2				01		1		1		
ENGR PHYSICS WITH NUC OPTICA	2		2								3		
SCHOOL TOTAL	6		5				19	3	14	5	5	11	6
UNIVERSITY OF CINCINNATI													
NUCLEAR ENGINEERING	7		7		1		9	1	5	2		7	3
CHEMICAL WITH NUCLEAR OPTICN											2		
SCHOOL TOTAL	7		7		1		9	1	5	2	2	7	3
STATE TOTAL	13		12		1		53	6	28	8	7	26	11
OKLAHOMA													
OKLAHOMA STATE UNIVERSITY*	-	-	-	-	-	-	-	-	-	-	-	-	-
SCHOOL TOTAL													
UNIVERSITY OF OKLAHOMA													
NUCLEAR ENGINEERING	8	1	2				1				3	1	2
SCHOOL TOTAL	8	1	2				1				3	1	2
STATE TOTAL	8	1	2				1				3	1	2
OREGON													
OREGON STATE UNIVERSITY													
NUCLEAR ENGINEERING	15		13	6			8	3	3		9	2	
NUC ENGINEERING TECHNOLOGY	8		20	19							6		
SCHOOL TOTAL	23		33	25			8	3	3		15	2	

*No candidates presently enrolled

NUCLEAR ENGINEERING
ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1973										DEGREES GRANTED JULY 1972 - JUNE 1973		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
OREGON													
STATE TOTAL	23		33	25			8	3	3		15	2	
PENNSYLVANIA													
CARNEGIE-MELLON UNIVERSITY													
NUCLEAR ENGINEERING							4	25	4	14		17	8
SCHOOL TOTAL							4	25	4	14		17	8
PENNSYLVANIA STATE UNIVERSITY													
NUCLEAR ENGINEERING	27		17				43		10	2	21	12	3
SCHOOL TOTAL	27		17				43		10	2	21	12	3
STATE TOTAL	27		17				47	25	14	16	21	29	11
PUERTO RICO													
UNIVERSITY OF PUERTO RICO, MAYAGUEZ													
NUCLEAR ENGINEERING							8	4				5	
SCHOOL TOTAL							8	4				5	
STATE TOTAL							8	4				5	
RHODE ISLAND													
UNIVERSITY OF RHODE ISLAND													
NUCLEAR ENGINEERING							3	1				1	
CIVIL WITH NUCLEAR OPTION	1												
OCEAN WITH NUC OPTION										1			1
SCHOOL TOTAL	1						3	1		1		1	1
STATE TOTAL	1						3	1		1		1	1
SOUTH DAKOTA													
SOUTH DAKOTA STATE UNIVERSITY													
MECHANICAL WITH NUCLEAR OPTION											2		
SCHOOL TOTAL											2		
STATE TOTAL											2		
TENNESSEE													
UNIVERSITY OF TENNESSEE, KNOXVILLE													
NUCLEAR ENGINEERING	18	2	21				15	13	10	4	12	5	2
SCHOOL TOTAL	18	2	21				15	13	10	4	12	5	2

NUCLEAR ENGINEERING
ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1973										DEGREES GRANTED JULY 1972 - JUNE 1973		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
VANDERBILT UNIVERSITY													
CIVIL WITH NUCLEAR OPTION	3		3								4		
ELECTRICAL WITH NUCLEAR OPTION	1												
MECHANICAL WITH NUCLEAR OPTION	6		6								5		
ENGR SCI WITH NUCLEAR OPTION	1		1								1		
SCHOOL TOTAL	11*		10								10		
STATE TOTAL	29	2	31				15	13	10	4	22	5	2
TEXAS													
TEXAS A & M UNIVERSITY													
NUCLEAR ENGINEERING	32		35				24		7	2	32	15	2
SCHOOL TOTAL	32		35				24		7	2	32	15	2
UNIV OF TEXAS AT AUSTIN													
MECHANICAL WITH NUCLEAR OPTION	25		25				12		5		25	4	3
SCHOOL TOTAL	25*		25*				12		5		25*	4	3
STATE TOTAL	57		60				36		12	2	57	19	5
UTAH													
UNIVERSITY OF UTAH													
NUCLEAR ENGINEERING							5	2	1			3	
CHEMICAL WITH NUCLEAR OPTION			3		1								
CIVIL WITH NUCLEAR OPTION			1									2	
ELECTRICAL WITH NUCLEAR OPTION			6										
MECHANICAL WITH NUCLEAR OPTION	2		10		1							2	
SCHOOL TOTAL	2		20		2		5	2	1			7	
UTAH STATE UNIVERSITY													
MECHANICAL WITH NUCLEAR OPTION	8		10				8				12	6	
SCHOOL TOTAL	8		10				8				12	6	
STATE TOTAL	10		30		2		13	2	1		12	13	
VIRGINIA													
UNIVERSITY OF VIRGINIA													
NUCLEAR ENGINEERING	36		18		5		21	1	10	9	30	11	5
SCHOOL TOTAL	36		18		5		21	1	10	9	30	11	5

*Estimated

NUCLEAR ENGINEERING
ENROLLMENTS AND DEGREES IN SUBFIELDS BY INSTITUTION

STATE - INSTITUTION AND SUBFIELD	ENROLLMENT FALL 1973										DEGREES GRANTED JULY 1972 - JUNE 1973		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
VIRGINIA POLYTECHNIC INSTITUTE													
NUCLEAR ENGINEERING							13	24	5			13	1
CHEMICAL WITH NUCLEAR OPTICN	2		2								1		
ELECTRICAL WITH NUCLEAR OPTION	15		12								15		
MECHANICAL WITH NUCLEAR OPTICN	15		14								15		
SCHOOL TOTAL	32		28				13	24	5		31	13	1
STATE TOTAL	68		46		5		34	25	19	5	61	24	6
WASHINGTON													
UNIVERSITY OF WASHINGTON													
NUCLEAR ENGINEERING	1	1	1				35	5	9			15	3
SCHOOL TOTAL	1	1	1				35	5	9			15	3
WASHINGTON STATE UNIVERSITY													
CHEMICAL WITH NUCLEAR OPTICN			4								1		
ELECTRICAL WITH NUCLEAR OPTION			6								2		
MECHANICAL WITH NUCLEAR OPTICN	1		1		1						1		
SCHOOL TOTAL	1		11		1						4		
STATE TOTAL	2	1	12		1		35	5	9		4	15	3
WEST VIRGINIA													
WEST VIRGINIA UNIVERSITY													
CHEMICAL WITH NUCLEAR OPTICN							01						
SCHOOL TOTAL							1						
STATE TOTAL							1						
WISCONSIN													
UNIVERSITY OF WISCONSIN, MADISCN													
NUCLEAR ENGINEERING	29		30				34		24		20	14	6
SCHOOL TOTAL	29		30				34		24		20	14	6
STATE TOTAL	29		30				34		24		20	14	6
WYOMING													
UNIVERSITY OF WYOMING													
MECHANICAL WITH NUCLEAR OPTION	3		6										
SCHOOL TOTAL	3		6										
STATE TOTAL	3		6										
GRAND TOTAL	603	7	670	30	22		766	252	504	118	551	442	126

APPENDIX D

FOREIGN NATIONALS, WOMEN, AND MINORITIES
ENROLLMENTS AND DEGREES BY INSTITUTION
NUCLEAR ENGINEERING

FT = FULL TIME
PT = PART TIME

STATE - INSTITUTION	ENROLLMENT FALL 1973										DEGREES GRANTED JULY 1972 - JUNE 1973		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
ALABAMA													
TUSKEGEE INSTITUTE							1						
FOREIGN NATIONALS							4					2	
BLACKS, U.S. CITIZENS													
ARIZONA*													
UNIVERSITY OF ARIZONA													
FOREIGN NATIONALS			1				2		3				
WOMEN, U.S. CITIZENS									1				
SPANISH SPEAKING U.S. CITIZENS			1							1			1
ORIENTAL, U.S. CITIZENS							1		1				
NATIVE AMERICAN INDIANS	1												
CALIFORNIA													
CALIFORNIA STATE UNIVERSITY, SAN JOSE													
FOREIGN NATIONALS	1		1								1		
SPANISH SPEAKING U.S. CITIZENS			1								1		
STANFORD UNIVERSITY													
FOREIGN NATIONALS							2		3				
BLACKS, U.S. CITIZENS							1						
ORIENTAL, U.S. CITIZENS									1			1	
UNIVERSITY OF CALIFORNIA, BERKELEY**							14		28			3	2
FOREIGN NATIONALS									1				
WOMEN, U.S. CITIZENS							2						
SPANISH SPEAKING U.S. CITIZENS							1		2	1			
ORIENTAL, U.S. CITIZENS									1				
NATIVE AMERICAN INDIANS													
UNIVERSITY OF CALIFORNIA, LOS ANGELES***													2
FOREIGN NATIONALS													
UNIVERSITY OF CALIFORNIA, SANTA BARBARA													
FOREIGN NATIONALS			1								1		
SPANISH SPEAKING U.S. CITIZENS			1								1		
ORIENTAL, U.S. CITIZENS											1		
DISTRICT OF COLUMBIA													
CATHOLIC UNIVERSITY OF AMERICA													
FOREIGN NATIONALS								4	1	3			
WOMEN, U.S. CITIZENS										1			
BLACKS, U.S. CITIZENS								1					
ORIENTAL, U.S. CITIZENS										1			

*Arizona State University reports information not available
**Information not available for undergraduates
***Information on minorities and women not available

FOREIGN NATIONALS, WOMEN, AND MINORITIES ENROLLMENTS AND DEGREES BY INSTITUTION NUCLEAR ENGINEERING

STATE - INSTITUTION	ENROLLMENT FALL 1973										DEGREES GRANTED JULY 1972 - JUNE 1973		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
HOWARD UNIVERSITY													
FOREIGN NATIONALS			5				4	2			4		
BLACKS, U.S. CITIZENS			3				3	1			7		
FLORIDA													
UNIVERSITY OF FLORIDA													
FOREIGN NATIONALS	1												
WOMEN, U.S. CITIZENS	1												
SPANISH SPEAKING U.S. CITIZENS			1										
GEORGIA													
GEORGIA INSTITUTE OF TECHNOLOGY													
FOREIGN NATIONALS							9		7	1		9	1
BLACKS, U.S. CITIZENS							2						
SPANISH SPEAKING U.S. CITIZENS							1						
ILLINOIS													
NORTHWESTERN UNIVERSITY													
FOREIGN NATIONALS								1	4	1		3	1
WOMEN, U.S. CITIZENS			1						1		1	1	
BLACKS, U.S. CITIZENS			1										1
UNIVERSITY OF ILLINOIS AT URBANA													
FOREIGN NATIONALS							2		7				
ORIENTAL, U.S. CITIZENS												1	1
INDIANA													
PURDUE UNIVERSITY													
FOREIGN NATIONALS							4		1				
WOMEN, U.S. CITIZENS	1						1						
BLACKS, U.S. CITIZENS							1						
SPANISH SPEAKING U.S. CITIZENS	1												
IOWA													
IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY													
FOREIGN NATIONALS							3		8				2
WOMEN, U.S. CITIZENS							1						
BLACKS, U.S. CITIZENS							1						

FOREIGN NATIONALS, WOMEN, AND MINORITIES
ENROLLMENTS AND DEGREES BY INSTITUTION
NUCLEAR ENGINEERING

STATE - INSTITUTION	ENROLLMENT FALL 1973										DEGREES GRANTED JULY 1972 - JUNE 1973		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
KANSAS													
KANSAS STATE UNIVERSITY									3	1	1	4	3
FOREIGN NATIONALS			1										
WOMEN, U.S. CITIZENS	1		5										
KENTUCKY													
UNIVERSITY OF KENTUCKY													
FOREIGN NATIONALS							2		2				
ORIENTAL, U.S. CITIZENS								1					
LOUISIANA													
LOUISIANA STATE UNIVERSITY, BATON ROUGE													
FOREIGN NATIONALS							2					1	
WOMEN, U.S. CITIZENS								1					
MARYLAND													
UNIVERSITY OF MARYLAND, COLLEGE PARK													
WOMEN, U.S. CITIZENS								1				1	
MASSACHUSETTS													
LOWELL TECHNOLOGICAL INSTITUTE													
FOREIGN NATIONALS	3		2				5	1			3		
WOMEN, U.S. CITIZENS	1						1	1					
BLACKS, U.S. CITIZENS											1		
ORIENTAL, U.S. CITIZENS								1					
MASSACHUSETTS INSTITUTE OF TECHNOLOGY													
FOREIGN NATIONALS-ALL CURRICULA							14		31			6	6
WOMEN, U.S. CITIZENS							1						
BLACKS, U.S. CITIZENS									2				
ORIENTAL, U.S. CITIZENS									3			1	
MICHIGAN													
UNIVERSITY OF MICHIGAN													
FOREIGN NATIONALS			1		1		5	4	17			7	2
WOMEN, U.S. CITIZENS			1										
BLACKS, U.S. CITIZENS	1												
SPANISH SPEAKING U.S. CITIZENS							1						
ORIENTAL, U.S. CITIZENS							1				1		

FOREIGN NATIONALS, WOMEN, AND MINORITIES
ENROLLMENTS AND DEGREES BY INSTITUTION
NUCLEAR ENGINEERING

STATE - INSTITUTION	ENROLLMENT FALL 1973										DEGREES GRANTED JULY 1972 - JUNE 1973		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
MISSISSIPPI													
MISSISSIPPI STATE UNIVERSITY													
WOMEN, U.S. CITIZENS	1										1		
BLACKS, U.S. CITIZENS											1		
MISSOURI													
UNIVERSITY OF MISSOURI, COLUMBIA													
FOREIGN NATIONALS		3					2		2	3		5	1
WOMEN, U.S. CITIZENS										1			
BLACKS, U.S. CITIZENS									1				
ORIENTAL, U.S. CITIZENS			1										
NEVADA													
UNIVERSITY OF NEVADA, RENO													
FOREIGN NATIONALS	1												
WOMEN, U.S. CITIZENS			1								1		
NEW JERSEY													
NEWARK COLLEGE OF ENGINEERING													
FOREIGN NATIONALS			4										
WOMEN, U.S. CITIZENS			4										
BLACKS, U.S. CITIZENS			1										
SPANISH SPEAKING U.S. CITIZENS			3										
ORIENTAL, U.S. CITIZENS			1										
NEW MEXICO													
UNIVERSITY OF NEW MEXICO													
FOREIGN NATIONALS							1		1				
WOMEN, U.S. CITIZENS							1						
SPANISH SPEAKING U.S. CITIZENS							1						
ORIENTAL, U.S. CITIZENS							1						1
NEW YORK													
COLUMBIA UNIVERSITY													
FOREIGN NATIONALS	1						3*	4**	12				
WOMEN, U.S. CITIZENS	1												
BLACKS, U.S. CITIZENS	1												
SPANISH SPEAKING U.S. CITIZENS	1												

*Includes two Professional Degrees **Includes one Professional Degree

FOREIGN NATIONALS, WOMEN, AND MINORITIES
ENROLLMENTS AND DEGREES BY INSTITUTION
NUCLEAR ENGINEERING

STATE - INSTITUTION	ENROLLMENT FALL 1973										DEGREES GRANTED JULY 1972 - JUNE 1973		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
NEW YORK													
COLUMBIA UNIVERSITY			1										
ORIENTAL, U.S. CITIZENS													
CORNELL UNIVERSITY							1		3				
FOREIGN NATIONALS													
POLYTECHNIC INSTITUTE OF NEW YORK							1	10	3				
FOREIGN NATIONALS								2	1				
WOMEN, U.S. CITIZENS	1												
ORIENTAL, U.S. CITIZENS			1										
RENSSELAER POLYTECHNIC INSTITLTE							1		3				
FOREIGN NATIONALS	1						1*				1		
WOMEN, U.S. CITIZENS			1*				3*					3	
BLACKS, U.S. CITIZENS			1*										
ORIENTAL, U.S. CITIZENS	1												
STATE UNIVERSITY AT BUFFALO													
FOREIGN NATIONALS			1										
NORTH CAROLINA													
NORTH CAROLINA STATE UNIVERSITY AT RALEIGH													
FOREIGN NATIONALS	1				1		3		2				1
WOMEN, U.S. CITIZENS	1												
OHIO													
CASE WESTERN RESERVE UNIVERSITY									2			1	1
FOREIGN NATIONALS													
OHIO STATE UNIVERSITY							3					1	
FOREIGN NATIONALS													
WOMEN, U.S. CITIZENS			1				1						
BLACKS, U.S. CITIZENS													
UNIVERSITY OF CINCINNATI							3					3	1
FOREIGN NATIONALS							2						
ORIENTAL, U.S. CITIZENS													
OKLAHOMA													
UNIVERSITY OF OKLAHOMA													1
FOREIGN NATIONALS							1						
NATIVE AMERICAN INDIANS													
OREGON													
OREGON STATE UNIVERSITY													
FOREIGN NATIONALS			1	25			2						
WOMEN, U.S. CITIZENS	2		2										

*Black female shown in both categories

FOREIGN NATIONALS, WOMEN, AND MINORITIES ENROLLMENTS AND DEGREES BY INSTITUTION NUCLEAR ENGINEERING

STATE - INSTITUTION	ENROLLMENT FALL 1973										DEGREES GRANTED JULY 1972 - JUNE 1973		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
PENNSYLVANIA													
CARNEGIE-MELLON UNIVERSITY													
FOREIGN NATIONALS									2			4	1
WOMEN, U.S. CITIZENS							1	2					
BLACKS, U.S. CITIZENS								1		1		1	
ORIENTAL, U.S. CITIZENS												1	1
PENNSYLVANIA STATE UNIVERSITY													
FOREIGN NATIONALS-ALL CURRICULA							8		4			2	
WOMEN, U.S. CITIZENS			2				1						
PUERTO RICO													
UNIVERSITY OF PUERTO RICO, MAYAGUEZ													
FOREIGN NATIONALS-ALL CURRICULA							1	2				2	
SPANISH SPEAKING U.S. CITIZENS							7	2				3	
RHODE ISLAND													
UNIVERSITY OF RHODE ISLAND													
FOREIGN NATIONALS												1	
TENNESSEE													
UNIVERSITY OF TENNESSEE, KNOXVILLE													
FOREIGN NATIONALS							4	1	8	1		1	
WOMEN, U.S. CITIZENS	1		1						1				
BLACKS, U.S. CITIZENS													1
VANDERBILT UNIVERSITY*													
WOMEN, U.S. CITIZENS	1		1								1		
TEXAS													
TEXAS A & M UNIVERSITY													
FOREIGN NATIONALS									1				1
WOMEN, U.S. CITIZENS	1		2										
BLACKS, U.S. CITIZENS	1		1									1	
SPANISH SPEAKING U.S. CITIZENS	2						1						
ORIENTAL, U.S. CITIZENS	1								1				

*Undergraduate and BS figures are estimates

FOREIGN NATIONALS, WOMEN, AND MINORITIES
ENROLLMENTS AND DEGREES BY INSTITUTION
NUCLEAR ENGINEERING

STATE - INSTITUTION	ENROLLMENT FALL 1973										DEGREES GRANTED JULY 1972 - JUNE 1973		
	UNDERGRAD 3 RD YEAR		UNDERGRAD 4 TH YEAR		UNDERGRAD 5 TH YEAR		MASTER		DOCTORATE				
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	BACH	MASTER	PHD
UNIV OF TEXAS AT AUSTIN							1				3		
FOREIGN NATIONALS											3		
SPANISH SPEAKING U.S. CITIZENS	3		3										
UTAH													
UNIVERSITY OF UTAH								1					
FOREIGN NATIONALS			2										
SPANISH SPEAKING U.S. CITIZENS			1										
ORIENTAL, U.S. CITIZENS													
UTAH STATE UNIVERSITY			1										
ORIENTAL, U.S. CITIZENS													
VIRGINIA													
UNIVERSITY OF VIRGINIA							1	1	2				1
FOREIGN NATIONALS	2												
WOMEN, U.S. CITIZENS	1						1				1		
BLACKS, U.S. CITIZENS													
ORIENTAL, U.S. CITIZENS							3		6		1		
VIRGINIA POLYTECHNIC INSTITUTE							1				1		
FOREIGN NATIONALS	2												
WOMEN, U.S. CITIZENS													
WASHINGTON													
UNIVERSITY OF WASHINGTON								6					
FOREIGN NATIONALS							1		1				
WOMEN, U.S. CITIZENS													
ORIENTAL, U.S. CITIZENS													
WASHINGTON STATE UNIVERSITY			1										
WOMEN, U.S. CITIZENS													
WISCONSIN													
UNIVERSITY OF WISCONSIN, MADISON							6		7		2	5	1
FOREIGN NATIONALS	1		1						2				
WOMEN, U.S. CITIZENS							1						
BLACKS, U.S. CITIZENS													

APPENDIX E

NUCLEAR ENGINEERING
INSTITUTIONS WITHIN SUBFIELDS
FALL 1973

CURRICULUM OR OPTION	INSTITUTION
NUCLEAR ENGINEERING	AIR FORCE INSTITUTE OF TECHNOLOGY
	CARNEGIE-MELLON UNIVERSITY
	CATHOLIC UNIVERSITY OF AMERICA
	COLUMBIA UNIVERSITY
	CORNELL UNIVERSITY
	GEORGIA INSTITUTE OF TECHNOLOGY
	IDAHO STATE UNIVERSITY
	IOWA STATE UNIVERSITY OF SCIENCE & TECHNOLOGY
	KANSAS STATE UNIVERSITY
	LOUISIANA STATE UNIVERSITY, BATON ROUGE
	LOWELL TECHNOLOGICAL INSTITUTE
	MASSACHUSETTS INSTITUTE OF TECHNOLOGY
	MISSISSIPPI STATE UNIVERSITY
	NORTH CAROLINA STATE UNIVERSITY AT RALEIGH
	NORTHWESTERN UNIVERSITY
	OHIO STATE UNIVERSITY
	OREGON STATE UNIVERSITY
	PENNSYLVANIA STATE UNIVERSITY
	POLYTECHNIC INSTITUTE OF NEW YORK
	PURDUE UNIVERSITY
	RENSSELAER POLYTECHNIC INSTITUTE
	STATE UNIVERSITY AT BUFFALO
	TEXAS A & M UNIVERSITY
	TUSKEGEE INSTITUTE
	UNITED STATES COAST GUARD ACADEMY
	UNIVERSITY OF ARIZONA
	UNIVERSITY OF CALIFORNIA, BERKELEY
	UNIVERSITY OF CALIFORNIA, LOS ANGELES
	UNIVERSITY OF CALIFORNIA, SANTA BARBARA
	UNIVERSITY OF CINCINNATI
	UNIVERSITY OF FLORIDA
	UNIVERSITY OF IDAHO
	UNIVERSITY OF ILLINOIS AT URBANA
	UNIVERSITY OF KENTUCKY
	UNIVERSITY OF MARYLAND, COLLEGE PARK
	UNIVERSITY OF MICHIGAN
	UNIVERSITY OF MISSOURI, COLUMBIA
	UNIVERSITY OF MISSOURI, ROLLA
	UNIVERSITY OF NEW MEXICO
	UNIVERSITY OF OKLAHOMA
	UNIVERSITY OF PUERTO RICO, MAYAGUEZ
	UNIVERSITY OF RHODE ISLAND
	UNIVERSITY OF TENNESSEE, KNOXVILLE
	UNIVERSITY OF UTAH
	UNIVERSITY OF VIRGINIA
	UNIVERSITY OF WASHINGTON
	UNIVERSITY OF WISCONSIN, MADISON
	VIRGINIA POLYTECHNIC INSTITUTE

NUCLEAR ENGINEERING
INSTITUTIONS WITHIN SUBFIELDS
FALL 1973

CURRICULUM OR OPTION	INSTITUTION
CHEMICAL WITH NUCLEAR OPTION	
	NEWARK COLLEGE OF ENGINEERING
	OHIO STATE UNIVERSITY
	UNIVERSITY OF CINCINNATI
	UNIVERSITY OF IDAHO
	UNIVERSITY OF KENTUCKY
	UNIVERSITY OF MARYLAND, COLLEGE PARK
	UNIVERSITY OF MISSOURI, COLUMBIA
	UNIVERSITY OF UTAH
	VIRGINIA POLYTECHNIC INSTITUTE
	WASHINGTON STATE UNIVERSITY
	WEST VIRGINIA UNIVERSITY
CIVIL WITH NUCLEAR OPTION	
	STANFORD UNIVERSITY
	UNIVERSITY OF CALIFORNIA, BERKELEY
	UNIVERSITY OF MISSOURI, COLUMBIA
	UNIVERSITY OF RHODE ISLAND
	UNIVERSITY OF UTAH
	VANDERBILT UNIVERSITY
ELECTRICAL WITH NUCLEAR OPTION	
	CASE WESTERN RESERVE UNIVERSITY
	NEWARK COLLEGE OF ENGINEERING
	STANFORD UNIVERSITY
	UNIVERSITY OF ARIZONA
	UNIVERSITY OF CALIFORNIA, BERKELEY
	UNIVERSITY OF IDAHO
	UNIVERSITY OF MARYLAND, COLLEGE PARK
	UNIVERSITY OF MISSOURI, COLUMBIA
	UNIVERSITY OF NEVADA, RENO
	UNIVERSITY OF NEW MEXICO
	UNIVERSITY OF UTAH
	VANDERBILT UNIVERSITY
	VIRGINIA POLYTECHNIC INSTITUTE
	WASHINGTON STATE UNIVERSITY
INDUSTRIAL WITH NUCLEAR OPTION	
	UNIVERSITY OF CALIFORNIA, BERKELEY
MECHANICAL WITH NUCLEAR OPTION	
	ARIZONA STATE UNIVERSITY
	CALIFORNIA STATE UNIVERSITY, SAN JOSE

NUCLEAR ENGINEERING
INSTITUTIONS WITHIN SUBFIELDS
FALL 1973

CURRICULUM OR OPTION	INSTITUTION
MECHANICAL WITH NUCLEAR OPTION	HOWARD UNIVERSITY
	NEWARK COLLEGE OF ENGINEERING
	OHIO STATE UNIVERSITY
	SOUTH DAKOTA STATE UNIVERSITY
	STANFORD UNIVERSITY
	UNIV OF TEXAS AT AUSTIN
	UNIVERSITY OF ARIZONA
	UNIVERSITY OF CALIFORNIA, BERKELEY
	UNIVERSITY OF IDAHO
	UNIVERSITY OF KENTUCKY
	UNIVERSITY OF MARYLAND, COLLEGE PARK
	UNIVERSITY OF MISSOURI, COLUMBIA
	UNIVERSITY OF NEW MEXICO
	UNIVERSITY OF NOTRE DAME
	UNIVERSITY OF UTAH
	UNIVERSITY OF WYOMING
	UTAH STATE UNIVERSITY
	VANDERBILT UNIVERSITY
	VIRGINIA POLYTECHNIC INSTITUTE
	WASHINGTON STATE UNIVERSITY
GENERAL WITH NUCLEAR OPTION	IDAHO STATE UNIVERSITY
ENGR SCI WITH NUCLEAR OPTION	ARIZONA STATE UNIVERSITY
	LOUISIANA STATE UNIVERSITY, BATON ROUGE
	NEWARK COLLEGE OF ENGINEERING
	UNIVERSITY OF NEVADA, RENO
	VANDERBILT UNIVERSITY
ENGR PHYSICS WITH NUC OPTION	OHIO STATE UNIVERSITY
NUC ENGINEERING TECHNOLOGY	OREGON STATE UNIVERSITY
OCEAN WITH NUC OPTION	UNIVERSITY OF RHODE ISLAND

NUCLEAR ENGINEERING
INSTITUTIONS WITHIN SUBFIELDS
FALL 1973

CURRICULUM OR OPTION	INSTITUTION
AEROSPACE WITH NUC MAJOR	AIR FORCE INSTITUTE OF TECHNOLOGY
METALLURGICAL ENGR WITH NUC OPTION	UNIVERSITY OF IDAHO
GEOCHRONOLOGY (NUC MINOR)	UNIVERSITY OF ARIZONA

APPENDIX F

UNITED STATES

ATOMIC ENERGY COMMISSION

WASHINGTON, D.C. 20545

NOV 2 1973

Dear Sir:

Enclosed are the forms for obtaining information on nuclear engineering enrollments for this fall and graduates during the past academic year. We are anxious to receive your response as quickly as possible, as the information derived from your response and those of other nuclear engineering faculty has proved to be useful far beyond the AEC management function for which the survey was designed. For example, the report has been used by AEC and several private firms as a recruitment tool, directing would-be employers to schools producing a particular type of nuclear engineering graduate.

You may note a few changes in this year's form, but the basic information will tie in with that reported previously. The breakouts for sex and minority information result from numerous requests for such information as well as to satisfy our own needs. The placement data supplied last year were of great value for making manpower projections, so we would be very grateful if your response to these questions is as complete as last year.

If there are any problems in completing the questionnaire, please place a collect call to Mrs. June S. Chewning, Acting Chief, Manpower Information Systems Branch, at 301 973-4417. We would appreciate a reply by November 12, 1973, at the latest. Thank you for treating this as a high priority request.

Sincerely,

H. T. Herrick, Director
Division of Labor Relations

Enclosures:
As stated

Form AEC-616
(10-73)

IMPORTANT: *Please see instructions on reverse side before completing this form.*

U.S. ATOMIC ENERGY COMMISSION
NUCLEAR ENGINEERING ENROLLMENT AND DEGREE SURVEY

OMB No. 38-R0176
Approval Expires March 1977

Name of Institution (1–36) | City (37–61) | Zip Code (62–67)

Department(s) Reporting (37–61) | A1 (79–80)

Name of Official Supplying Data (1–36)

Title of Official Supplying Data (37–61) | Area Code (62–64) | Telephone Number (65–76) | A2 (79–80)

SCHOOL NUMBER (1–6)	Curriculum or Option *(See Instruction a.)* *(Write in those not listed)* ENGINEERS	CODE (7–8)	ENROLLMENTS FALL 1973 — UNDERGRADUATES 3rd Year Full-Time (9–10)	3rd Year Part-Time (11–12)	4th Year Full-Time (13–14)	4th Year Part-Time (15–16)	5th Year Full-Time (17–18)	5th Year Part-Time (19–20)	MASTER CANDIDATES Full-Time (21–22)	MASTER CANDIDATES Part-Time (23–24)	DOCTORATE CANDIDATES Full-Time (25–26)	DOCTORATE CANDIDATES Part-Time (27–28)	DEGREES GRANTED July 1972 June 1973 Bachelor (29–30)	Master (31–32)	Doctorate (33–34)	CARD (79–80)
	Nuclear	10														11
	Chemical, with nuclear option	20														11
	Civil, with nuclear option	30														11
	Electrical, with nuclear option	40														11
	Industrial, with nuclear option	50														11
	Mechanical, with nuclear option	60														11
	Other *(Specify)*	7														11
	TOTAL ▶															
• *Please break out the following from the totals reported above.*																
	Women, U.S. Citizens	81														11
	Blacks, U.S. Citizens	82														11
	Spanish-Speaking, U.S. Citizens	83														11
	Oriental, U.S. Citizens	84														11
	Native American Indians	85														11
	Foreign Nationals	80														11

Date supplied above may be published in listings by individual institutions

Authorized Signature _____ *Date* _____

Remarks:

UNITED STATES ATOMIC ENERGY COMMISSION
Division of Labor Relations
Washington, D.C. 20545

Nuclear Engineering Degree and Enrollment Survey

INSTRUCTIONS FOR COMPLETING FORM AEC-616

This survey is conducted by the Atomic Energy Commission as part of a continuing effort to assure itself and its contractors a supply of well prepared experts in the nuclear field. With this questionnaire we hope to determine, by degree level, the yearly supply and anticipated supply of those trained in nuclear engineering or in another engineering discipline with a nuclear option, *except* in the areas of Radiation Health and Radiation Safety.

PLEASE READ THE FOLLOWING INSTRUCTIONS BEFORE FILLING OUT THE QUESTIONNAIRE

Instr. a. **Curriculum.** Using a separate line for each major program, report only those in engineering curricula which are nuclear-oriented, *excluding those which have health physics, radiation safety or* similar option. The latter group should be reported on AEC form 617, which is available from the Division of Labor Relations and should be submitted.

Combine very small specialties with related major areas.

Instr. b. Report only students who are enrolled in a degree program. Include co-op students* with full-time enrollments. If exact figures are not available, please give best estimate and indicate by an "E" after estimated number.

Instr. c. **Fifth-Year Students.** Report candidates for five year bachelor's degree, whether regular or co-op program. If the curriculum is an integrated one leading to a five-year master's degree, report fifth year students under master's degree column.

Instr. d. **Other Pre-Doctoral Degree.** Professional degree programs beyond the bachelor's but pre-doctoral in level are to be included as master's degree programs to simplify this report.

Instr. e. **Doctoral Programs.** Report only enrollments specifically leading to a doctor's degree. If ultimate degree is uncertain, report as master candidates

Instr. f. **Women, Minorities, Foreign Students.** Requests for information about women and minorities are numerous. The number of foreign nationals is important to predicting manpowe supplies. Therefore, please provide as accurate a breakout as possible. Blanks will be treated as zeros.

* For purposes of this survey, a co-op student is defined as one who alternates sessions of schooling with sessions of employment in a position related to his academic specialty.

U S GOVERNMENT PRINTING OFFICE: 1974— 535-748:57

Nuclear Engineering Degree Survey Supplement

Reporting Institution _____ Date _____

Please indicate placement of degree recipients reported on AEC Form 616:

Placement or plans after graduation (Please show in paren. numbers returning to previously held positions)	Degree Recipients July 1972-June 1973		
	Bachelor	Master	Doctor
a. Further study			
b. Academic employment (students employed part time should be shown in a.)			
c. U. S. Government employment			
d. GOCO (Gov.-owned, Contractor-operated installations) employment			
e. State and Local Government employment			
f. Industry employment			
g. Military service			
. Unknown			